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ABSTRACT

This model is based on the belief that all those affected by a competency-based high school diploma program should help formulate it. School systems should begin by considering two fundamental questions: (1) What competencies should all graduates possess? (2) How can these competencies be tested? The first step is the establishment of an advisory committee made up of teachers, administrators, students, and parents. Other competency-based programs should then be reviewed. The next step is asking such groups their opinions concerning the academic competencies seniors ought to have. These groups include community residents, teachers, students, high school seniors, and potential employers of graduates. A consultant can be hired to develop assessment instruments and sampling procedures. Using respondents' suggestions the advisory committee can identify program goals. A committee of teachers should then be appointed for each program goal area to specify competencies and construct valid performance indicators. The committee must also modify the curriculum to include the required competencies and set up a four-year testing program. The plan should then be offered to the public for comment and revision and finally submitted to the school board for approval. The competencies of current seniors should then be assessed as a pilot test of the performance indicators.
(Author/JM)

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A MODEL FOR THE DEVELOPMENT OF A COMPETENCY-BASED HIGH SCHOOL DIPLOMA PROGRAM AT THE LOCAL SCHOOL DISTRICT LEVEL

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to

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ABSTRACT

States across the country are requiring local school districts to implement Competency-Based High School Diploma (CBHSD) programs. Unfortunately, few documents or articles have been published describing how school divisions, given normal time and budgetary constraints, can successfully implement such programs. In this study, a model for school systems to follow when developing CBHSD programs is presented. The model is premised on the belief that all those affected by such a far-reaching program should play a role in formulating it. Consequently, the model draws students, teachers, school administrators, parents, local employers, and, in effect, the entire community into the decision-making process. The result is a psychometrically sound method for certifying that high school graduates possess minimum competencies which educators and the public recognize as valid.

A MODEL FOR THE DEVELOPMENT OF A COMPETENCY-BASED HIGH SCHOOL DIPLOMA PROGRAM AT THE LOCAL SCHOOL DISTRICT LEVEL

INTRODUCTION

In the United States, more than half of the states are at this time either planning or operating programs which would require prospective high school graduates to demonstrate attainment of minimum competencies before a high school diploma would be issued to them. According to a 1976 Gallup poll (Golladay 1977) sixty-five percent of the American public favors administering nationwide competency exams to potential high school graduates. In October, 1977 Rep. Ronald Mottl, D-Ohio, introduced a bill (H.R. 9574) which would establish a commission to develop educational standards for the nation's sixth, eighth, tenth, and twelfth graders. The bill is now in committee. It should be apparent to professional educators that the time for establishing minimum proficiency standards for high school graduates, whether it be at the local, state, or national level, has arrived. Whether or not this movement improves the quality of education in this country will be determined in large measure by the success that governing bodies experience in developing educationally and psychometrically sound minimum competency programs.

The movement toward the development of Competency-Based High School Diploma (CBHSD) programs is fraught with potential: the potential to upgrade our educational institutions and the quality of education received by their graduates as well as the potential for legal suits, abuse of the system, and student frustration and alienation. Some believe that the success of these programs will be most dependent upon the quality of the process which school systems follow in designing and implementing CBHSD programs.

School systems should consider two fundamental questions as they begin to develop a CBHSD program: (1) What competencies should all high school graduates possess;

and (2) how can these competencies be most validly and reliably tested? Although both issues must be successfully resolved if a CBHSD program is to function effectively, the second question is irrelevant if the school system fails to identify legitimate competencies. None of the recent psychometric advances made in areas such as the Rasch Model, multiple-matrix sampling, and criterion-referenced testing are of any value if educators are unsuccessful in defining what is to be tested.

In this paper a model will be presented which local school systems might find useful in developing a worthwhile CBHSD program. Although some attention is given to test construction, the primary focus is on identifying what competencies should be tested. Finally, although the model could be applied in a variety of settings, it will be discussed in reference to the situation in which school systems in the state of Virginia find themselves at this time.

LEGAL MANDATE FOR DEVELOPING CBHSD PROGRAMS IN VIRGINIA

In May of 1976 the Virginia State Board of Education passed a resolution which stipulated that, effective July 1, 1978, all high school graduates, in addition to earning the required number of units of credit, must demonstrate to the satisfaction of local school officials that they have attained four minimum competencies:

1. Functional literacy in communicative skills including the ability to read, write, and speak well;
2. Computational skills including the ability to work with decimals and percentages to the extent that they can effectively participate in society as consumers;
3. A basic knowledge and understanding of the history and cultures of the United States, including concepts and processes of democratic governance and our economic system;
4. The ability to pursue higher education in post-secondary schools or gain employment as a result of having gained a job-entry skill.

Since that time, the state legislature has decreed that the standards need not be applied to students graduating prior to the 1980-81 school year.

While identifying these four broad areas in which competencies must be developed, the State Board decided to leave the setting of specific competencies and the designing of assessment instruments to measure these competencies up to the local school districts. Although this concession to the principle of local control of public schools may be laudable, the decision placed an onerous burden on the 141 school districts in the state of Virginia.

RATIONALE FOR THE CBHSD MODEL

One point that should be made clear at the outset of this presentation is that the CBHSD Model is based on the assumption that local school officials do not want simply to satisfy the State's requirements in a token fashion. The State Board specified that competency must be attained in four broad areas. It seems evident that the State deliberately left these areas vague to allow school districts to define more specific competencies within these four areas which would be relevant to their students. Furthermore, the State Board did not decree that these were the only competencies which could be required. The CBHSD Model proposed in this study was founded on the belief that local school officials will perceive the State Board's regulations as an unprecedented opportunity to define the competencies which their high school graduates will possess and to require that these competencies be met.

The underlying philosophy behind this CBHSD Model is that all of the people who are affected by the outcome of the program should provide considerable input into the decision-making process. This will require soliciting the opinions of adults and students in the community, potential employers of high school graduates, and educators in the school system. These groups can make an invaluable contribution by providing different perspectives on the types of competencies which should be included in a CBHSD program.

A second reason for encouraging public participation is that the schools should serve the public and thus be responsive to its opinions. Albert Shanker disagreed with this public involvement stance: "When you encourage large groups of citizens to participate, then the whole function of education can no longer proceed, just as a hospital couldn't function if everyone in the community decided to come in and participate, to advise the doctors what to do, to advise the nurses what to do" (Jones, 1975, p. 45); however, this attitude contradicts

the principle of local control that has been cherished as an integral aspect of American education ever since its inception. Because the schools are totally supported by the taxpayers, and the only clients that schools serve are the children of taxpayers, it would seem reasonable to expect the public to participate actively in all issues regarding the basic orientation of the educational program. In the words of Harvey Scribner, former chancellor of the New York City Schools, "the public -- or at least a part of it -- is coming to realize that it owns the schools. To my mind, this development is the best single thing that has happened to public education in many years "(Jones, p.41).

Gordon Cawelti, Executive Secretary of the Association for Supervision and Curriculum Development, cited a third reason for insisting that the public have a meaningful voice in deciding educational issues. His position was that no educational program will succeed without public support, and that the best way to gain this support is to allow the public to actively participate in the decision-making process. Regarding goal setting, he wrote the following:

> Likely even more critical [than agreeing on criterion measures for evaluation] in this matter of goal setting is to see to it that public opinions gathered from taxpayers, teachers, administrators, principals, students, and fellow board members are integrated into a final set of policies or procedures. At all costs, do not solicit advice only to turn around and ignore it blatantly. Be responsive, take recommendations to heart when developing guidelines, and give priority to those goals considered paramount by the cross section of individuals participating in the suggestion network. (Cawelti, 1974, p. 37)

This last reason is one of the most important justifications for the model to be presented in this study. If a program as controversial as the CBHSD is to function effectively, it must be supported by many people. Parents must view it as a fair and legitimate set of regulations which will benefit their children and improve the quality of education. Teachers must perceive it as a program which will improve instruction rather than hamper it. And, maybe most importantly, students must approach the requirements as a

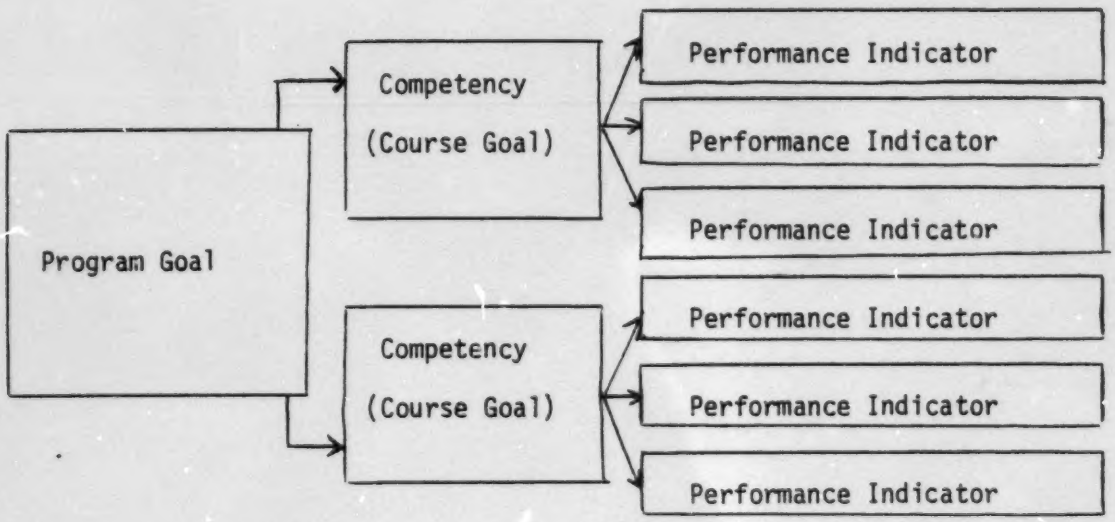
challenge which they can meet instead of an insurmountable barrier to graduation. This rationale for the CBHSD Model should be kept in mind when some of the steps appear to be inefficient or time-consuming.

TERMINOLOGY INCORPORATED IN THE CBHSD MODEL

Because of the prominence of the Oregon Plan in the field of CBHSD's, much of the terminology used in that program was incorporated in the CBHSD Model. In identifying and measuring competencies, three terms were introduced which proved useful in explaining the Model. The relationship between the terms "Program Goal," "Competency," and "Performance Indicator" is illustrated in Figure 1.

Figure 1

Structure of Competency-Based Unit



Each program goal is broken down into one or more competencies which are more specific than the statement of the goal but which do not specify evaluation criteria. For assessment, one or more performance indicators must be associated with each competency in a fashion such that one may infer that if the student succeeds on the performance indicators, then he has mastered the respective

competency. A performance indicator must include a "statement of purpose" specifying what exactly the student must do, and a "referent condition" spelling out the circumstances under which the behavior will be performed. A sample unit might serve to clarify any lingering confusion.

Goal: Students will be able to read and comprehend written material which adults often encounter.

Competency: Read and state three conditions of an apartment rental lease.

Performance Indicator: Given a standard written rental agreement for an apartment the student will read the document and then select and accurately paraphrase a minimum of three conditions, responsibilities, and/or obligations which either party to the agreement must fulfill. (Salem, 1974)

In the CBHSD Model, program goals, or what are sometimes referred to as "competency areas," are identified in the early stages. In later steps, teachers translate these program goals into competencies which are measured by performance indicators.

A MODEL FOR THE DEVELOPMENT OF A COMPETENCY-BASED HIGH SCHOOL DIPLOMA PROGRAM

A diagram of the CBHSD Model is presented in Figure 2. The Model is composed of six phases which encompass twenty-four separate steps. Each of these steps is described in detail below:

PHASE I

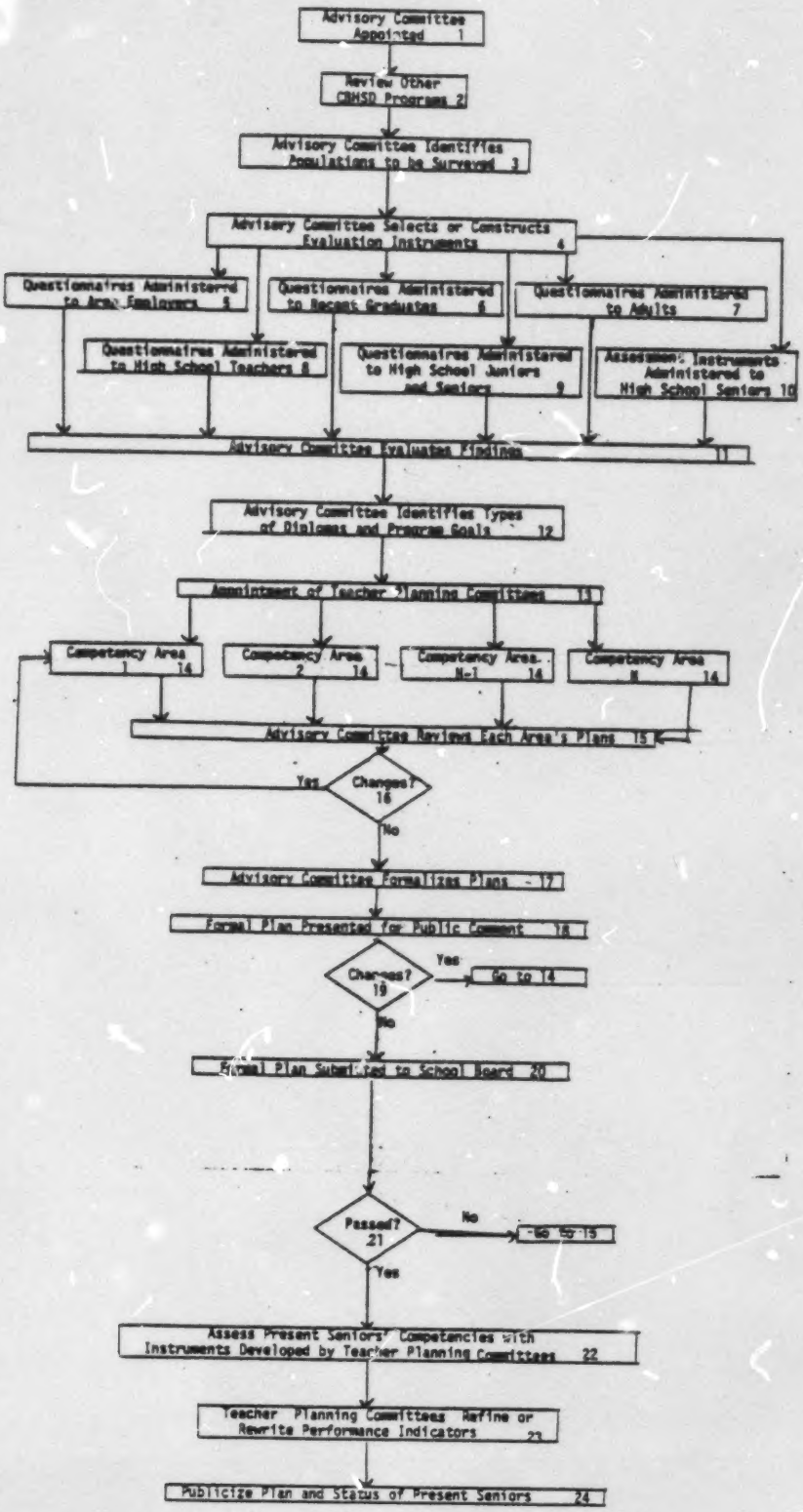
The Establishment of an Advisory Committee with the Background to Oversee the Development of a CBHSD Program

Step 1: Appointment of the Advisory Committee

Considering the vehement attack on bureaucracies voiced in the mid-seventies, initiating any model with the appointment of an advisory committee is likely to be viewed with skepticism or derision by some readers. Admittedly, local

Figure 2

Competency-Based High School Diploma (CBHSD) Model


Advisory Committee Appointed 1
Review Other CBHSD Programs 2
Advisory Committee Identifies Populations to be Surveyed 3
Advisory Committee Selects or Constructs Evaluation Instruments 4
Questionnaires Administered to Area Employers 5
Questionnaires Administered to Recent Graduates 6
Questionnaires Administered to Adults 7
Questionnaires Administered to High School Teachers 8
Questionnaires Administered to High School Juniors and Seniors 9
Assessment Instruments Administered to High School Seniors 10
Advisory Committee Evaluates Findings 11
Advisory Committee Identifies Types of Diplomas and Program Goals 12
Appointment of Teacher Planning Committees 13
Competency Area 1 14
Competency Area 2 14
Competency Area N-1 14
Competency Area N 14
Advisory Committee Reviews Each Area's Plans 15
Changes? 16
Yes
No
Advisory Committee Formalizes Plans 17
Formal Plan Presented for Public Comment 18
Changes? 19
Yes
Go to 14
No
Formal Plan Submitted to School Board 20
Passed? 21
No
Go to 15
Yes
Assess Present Seniors' Competencies with Instruments Developed by Teacher Planning Committees 22
Teacher Planning Committees Refine or Rewrite Performance Indicators 23
Publicize Plan and Status of Present Seniors 24

education districts often have been pressured into naming advisory committees to satisfy either federal requirements or local public interest groups. In some cases these committees have served as mere tokens or as rubber stamps. In other instances, they have proven to be effective dissipators of pressure placed on the superintendent's office. It is important to emphasize at this point, however, that this Advisory Committee is granted considerable powers and latitude, and in turn, its members are expected to expend a considerable amount of time on the development of a plan for a competency-based high school diploma.

Four segments of the population are represented on the Advisory Committee; teachers, administrators, students, and parents. Although representation may fluctuate depending on the size and structure of the school district, for most school districts the following distribution of representatives is suggested: three teachers representing the areas of language arts (or reading), mathematics, and a non-academic area (e.g. vocational studies); three administrators, including one high school principal, a central office staff member associated directly with secondary curriculum, and the person in the school system most knowledgeable of evaluation and psychometrics; two parents from different socio-economic groups; and two students, one college-bound and one vocationally-oriented. If the presence of students on such a committee is too threatening or radical to a school system, it may be desirable to make the students non-voting members, emphasizing their role as providers of input rather than as decision-makers. If the school district has more than one high school, it might be advisable that several principals would serve on the Committee. Some districts may choose to have the superintendent chair this Committee.

Members are nominated by the superintendent and approved by the school board; however, prior to making appointments, a concerted effort should be made to obtain volunteers who would like to be considered for membership, especially in the cases of teachers, parents, and students.

Step 2: Review of other Competency-Based High School Diploma Programs

The literature pertaining to CBHSD programs has mushroomed during the past two years. Unfortunately, little information has been published in professional journals or ERIC which provides sufficient detail to be of assistance to a local school system. Consequently, the task of accumulating information, while essential, becomes extremely time consuming in that letters requesting materials must be sent to numerous federal, state, and local government agencies. Synthesizing documents into one comprehensive report would take one person several weeks.

Because of the magnitude of this assignment, three options are suggested. If the school system employs an administrator who is responsible for program development and if adequate research facilities are available, this person might be assigned the responsibility of locating references, reviewing them, and preparing a summary report. Alternatively, one or more members of the Advisory Committee may take on this assignment. A third option would be for a school system, possibly in conjunction with other localities, to contract a consultant to prepare this report. This option would be particularly suited to small school divisions with limited staff and resources.

PHASE II

Solicitation of Data from Relevant Sources

Step 3: Identification of Relevant Populations to be Sampled

The model calls for the sampling of six populations; potential employers, graduates the general adult population, teachers, students, and high school seniors with specific concentration on assessing their academic competencies. Considerations which must be taken into account with each of these groups are presented below.

Businessmen who have had contact with recent high school graduates can shed considerable light on the strengths and weaknesses of the former students.

If they have not employed graduates or have had poor experiences with ones that they have hired, they should be able to inform the school community of deficiencies which could be remediated. As many different types of employers should be contacted as possible. All large-scale employers should certainly be questioned.

Although it is difficult to keep track of students after they leave school, graduates of a high school are in a unique position to critique the shortcomings of their education in light of their experiences since graduation. Considering the likelihood of a low rate of return, at least thirty percent of the graduates from the last five years should be randomly selected and polled.

Earlier, the opinion was expressed that the schools serve the public and, therefore, should be responsive to its wishes. Not only should parents have a strong voice in the education of their children, but the entire community, which depends upon the success of succeeding generations, should play a role in determing the type of students who leave its schools. For this reason, the opinions of all adults, not only those of parents with children in the public schools, should be surveyed. A true random sample of households in the community will ensure the acquisition of an unbiased picture of the community's views regarding the competencies of high school graduates; however, an undistorted description can be obtained only if the survey is carried out with a minimum of attrition. Adults must be contacted repeatedly, and provisions should be made for illiterate adults. The more vocal factions will have their chance to distort this picture on later occasions.

In addition to soliciting the opinions of people outside the school system, it is equally important that the school community be surveyed. All high school teachers and guidance counselors are administered surveys regarding the identification and prioritization of program goals. All juniors and seniors in high school also are surveyed to obtain their perspective on competency areas. Because entire populations are polled and are easily identifiable, no particular

sampling problems should be encountered.

The final source of input at this stage of the Model is derived from an objective assessment of the competencies of the present senior class. The entire class could take a series of criterion-referenced tests (to be discussed in detail in Step 10), or a form of multiple matrix sampling could be employed. This latter technique is described in simple terms in Step 23.

Step 4: Development of Evaluation Instruments

In this Model considerable emphasis is placed on soliciting information from a variety of sources and incorporating this information into the division's CBHSD program. With one exception, which will be elaborated upon later, suitable instruments do not exist for obtaining the type of information desired. The school system should consider hiring a consultant to develop appropriate assessment instruments and to design effective sampling procedures. If the school division has a research or evaluation department, these sources should be able to assist in this step.

In order to process information rapidly and to synthesize the results effectively, data should be collected in a format amenable to data processing. Questions should be closed rather than open-ended. If possible, data should be collected on computer scannable forms and processed through an optical mark reader. Questions on the various survey forms should overlap to a considerable degree in order to create a basis for comparing the responses of the different populations being sampled.

Step 5: Employers

A questionnaire is mailed to each of the employers identified in Step 4 as having contact with the division's high school graduates. The employer is asked to estimate the average number of the division's graduates that he employs each year. He then is asked to indicate general satisfaction or dissatisfaction with these employees and whether or not these graduates differed from graduates of other school divisions. Following these preliminary questions, he is instructed

to rate these graduates' abilities in a variety of specific program areas within the cognitive, affective, and psychomotor domains. Responses to each item are recorded on a Likert scale which includes a provision for indicating that the area in question is not applicable to the job situation. Every effort must be made to obtain the return of as large a percentage of questionnaires as possible.

Step 6: Recent Graduates

A considerable number of letters and phone calls are required to locate a sizable random sample of the high school graduates from the past five years. In relatively small school divisions this process will not be as difficult as it will be in urban areas because of the close inter-relationships which predominate in small, rural communities. Urban school systems might have to concentrate on graduates of the last one or two years.

Recent graduates are asked to rate the degree of importance of a series of competency areas which a high school graduate could be expected to possess. Not only are they asked to report the importance which they would place on these competencies, but they are requested to indicate the degree to which they have mastered them. Again, an active follow-up on the sample of graduates is required in order to improve the chances of obtaining the undistorted and representative opinions of this population.

Step 7: General Adult Population

After the sample from the adult population is selected, a questionnaire is mailed to each participant. Adults are questioned on the priority which they would assign to a list of program goals. Space is provided for adults to add program goals to the list. In addition to these ratings, adults record personal information concerning their education, their socio-economic status, the number of children they have attending public schools, their occupation, their age, and other relevant demographic data. Results then can be broken down for each of these variables to assist in the interpretation of the responses.

Step 8: High School Teachers

A questionnaire is administered to all of the high school teachers to assess their perception of the relative importance of competency areas under consideration. In addition, teachers rate the degree to which students possess these competencies. Teachers rate the importance and the level of mastery of competencies on Likert scales although an opportunity is provided for teachers to augment the list of possible competencies.

Step 9: Students

Virtually the same questionnaire that is administered to teachers is administered to all high school juniors and seniors. A discrepancy between the students' and teachers' perception of the importance of possible competencies might be expected. Rather than rate the student body's overall achievement on these competencies, students rate their personal attainment in these areas.

Step 10: Objective Assessment of Student Achievement

In order to acquire some data on students' mastery of competency areas under consideration, available assessment instruments are administered to students in the senior class. The tests should measure competencies in the following three areas: (1) functional literacy in communication skills; (2) computational skills required of the consumer; and (3) knowledge of the functioning of governmental and economic systems. With the increased emphasis on criterion-referenced tests and tests of functional literacy, suitable tests for assessment at this stage are available. The Richmond City Public Schools employ Senior High Assessment of Reading Performance (SHARP) and the Everyday Skills Test. It should be stressed, however, that in this Model such tests are used to acquire only a general picture of seniors' competencies in assorted areas. Their purpose is not to assess mastery or non-mastery of a definitive set of competencies.

PHASE III

Synthesis of Data and the Definition of Broad Competency Areas

Step 11 : Advisory Committee Evaluates Findings

The data collected from the questionnaires and assessment instruments employed in Steps 5-10 are massive and probably cannot be analyzed efficiently by hand tabulation. It is strongly recommended that computer facilities be located and that as much data as possible be computer analyzed. Computer programs from the Statistical Package for the Social Sciences (Nie et al., 1975) or the Statistical Analysis System (Barr et al., 1976) could be employed for analyzing and reporting the data. Hand tabulation may be possible for some small school systems, but for the most part, this method is time-consuming, limited in scope, and inaccurate.

It would be preferable, of course, if the findings from the different populations tended mutually to support each other, thereby prioritizing the areas in which competencies are to be identified. If discrepancies exist, it is difficult to delineate specific steps which should be followed. One possibility is to weight the responses of the various groups according to how much input it is felt that each group should have. Weighted averages could then be computed for each competency area, and a priority list could be generated. Basically, the Advisory Committee will have to review and digest the data collected and then reach a consensus as to which areas appear to be critical enough to warrant the definition of competencies to be required of every high school graduate.

Step 12: Identification of Program Goals and Types of Diplomas

At this point the Advisory Committee will have both a fairly good concept of the types of competencies which members of the local and school communities feel should be required of high school graduates as well as a crude assessment of the present seniors' abilities in some of these areas. An important decision must be made at this time: Should the Committee support standards which it can be reasonably certain a sizable number of its high school students will have difficulty passing even though they are perceived as important by the community,

or should competencies be identified which very few high school seniors will have trouble passing?

To begin to water down competencies at this point is self-defeating in that it is precisely the watered-down standards of high schools which provoked the nation's interest in identifying minimum competencies for graduates. Two alternatives might be followed in order to prevent this from happening.

One possibility would be to issue different types of diplomas. Students who do not master all of the competencies could be awarded either a conditional diploma with deficiencies specified or a certificate of attendance on which are reported the competencies which the student mastered. The possibilities would have to be specified, or at least approved, by the State Board.

Another possibility is to identify competencies which would be required of all graduates four years from the date of implementation but to phase in the number or level of these competencies over a period of four years. Standards would thus be realistic for students who would be graduating in the near future, yet the public would be ensured that the standards were to be raised to an acceptable level in a manner that would be fair to all high school students. Such a program does not appear to violate any of the standards specified by the State Board. In fact, this is the path that the Richmond City Public Schools has decided to follow.

Once a decision is reached regarding the type or types of diplomas to be issued and the timetable for implementing standards, the Advisory Committee must propose a list of program goals in which competencies are to be specified. When indecision arises in this process, it would be preferable to include the competency area at this stage because deletion would be easier than addition at a later date.

PHASE IV:

Identification of Competencies and Performance Indicators by Teacher Planning Committees

Step 13: Appointment of Teacher Planning Committees

The initial issue to be dealt with in this step is designating which academic departments are responsible for teaching each of the program goal areas. Some goals may be interdisciplinary in nature; whereas, others may indicate a need for the reorientation of departments or the formation of new ones.

Once these decisions are reached, a committee of teachers is appointed for each program goal area by the superintendent. These teachers are recommended by the high school administrative staff as being the most dedicated and best able to specify competencies and to construct valid performance indicators. Of course, in each program goal area, teachers are selected from among those teachers who will be held responsible for teaching students competencies in these areas.

Before the Teacher Planning Committees meet individually, the members must be provided with an excellent inservice program. Background materials, including the results of the school and community surveys, are presented to them in order to orient them to the CBHSD program. In addition, the teachers may need a few inservice sessions on writing instructional objectives (performance indicators) and constructing valid and reliable criterion-referenced tests. Although instructional objectives have been strongly advocated in the sixties and early seventies, many teachers have failed to master the rationale behind this movement or the techniques required for constructing worthwhile objectives.

Step 14: Identification of Competencies and Performance Indicators In Each Goal Area

The Teacher Planning Committees meet on a regular basis to identify competencies and performance indicators and to write test items in each competency area. Members may find the data collected during Steps 5-10 to be extremely helpful to them in specifying competencies. In addition to identifying competencies and performance indicators, the committees must decide where in the curriculum these competencies are to be taught and mastery of them to be measured. It would be unfair and certainly ineffective not to modify the curriculum to teach these competencies when they are required for graduation. Furthermore, if a Regent's Exam-type of atmosphere is to be avoided, it would be preferable to make testing a continuous, on-going process during a student's high school program rather than to administer one monumental exam to seniors every spring. Such a testing program requires that the committees construct some type of management system to monitor students' progress during their high school, and possibly post-high school, years.

Although the usual procedures for validating items on a criterion-referenced or mastery test differ considerably from those used for norm-referenced tests, the pilot testing of items is essential. If confidentiality is a concern, items should at least be presented to other teachers. Preferably, students should be asked to solve the questions in the presence of a member of a Teacher Planning Committee. The student's questions and comments should be recorded and adjustments to the item should be made where warranted. A number of test items should be developed for each performance indicator. These items are approved by the Teacher Planning Committee, not by the Advisory Committee.

This step is probably the most crucial step in the entire process. Proceeding from goals to the identification of competencies and performance indicators is a common stumbling block encountered by school systems. If it is not carried out with both common sense and a reasonable balance between measurement and philosophical considerations, the CBHSD program generated from the model will be deficient. A set of competencies and performance indicators is finally submitted

to the Advisory Committee.

PHASE V

Formalization of CBHSD Program

Steps 15-16: Advisory Committee Reviews the Plans Submitted by Each Teacher Planning Committee and Makes Necessary Changes

At this stage the members of the Advisory Committee are concerned primarily with the content of each committee's plan: (1) the degree of difficulty of competencies; (2) the number of competencies identified; (3) the correlation between competencies and performance indicators; (4) the specificity of competencies; and (5) the feasibility of assessing competencies. If a change is made in a program area's plan, the plan is resubmitted to the respective Teacher Planning Committee for its approval. If the teachers object to the changes, they request a meeting with the Advisory Committee to discuss and resolve their differences. Steps 14-16 may be repeated a number of times until all differences are resolved.

Step 17: Advisory Committee Formalizes Plan

At this stage the Advisory Committee agrees on a format for presenting in writing the entire CBHSD program to the public. A formal report should include the following sections: (1) introduction to the regulations issued by the Virginig State Board of Education and the rationale for a Competency-Based High School Diploma program; (2) summary of the procedures followed in constructing the CBHSD program; and (3) delineation of the proposed requirements for a high school diploma. The report should be prepared in order that it may be comprehended by the public, press, students, and educators alike.

Step 18: Formal Proposed Plan Presented for Public Comment

Even though the school board will not have given approval to the CBHSD program at this point, it is released to the public by the Advisory Committee in order to solicit the public's opinions on the proposed program. It is important to emphasize when this is done, however, that this is a program

proposed by the Advisory Committee and does not necessarily reflect the views of the school board on this issue. Because of the extreme importance of this program and the potential controversy which could surround it, every effort should be made to allow the public to review it at this stage and to submit constructive criticisms. A variety of formats could be employed to disseminate the program, although specifics would be somewhat dependent upon the media available as well as the nature of the community. The local newspaper could print the entire report or, at least, the list of competencies which would be required for graduation. An alternative which might be more appropriate for less literate communities would be to present a series of articles which would interpret the program to the community in simple terms. Members of the Advisory Committee could be interviewed on local radio or television stations. Presentations could be made at PTA meetings by the principal and Advisory Committee members. Special public meetings could be publicized well in advance and held at a convenient time for adults to attend. Orientation sessions could be arranged within the high school to discuss the proposed graduation requirements with students, giving the students the opportunity to criticize the program. Whenever possible, all suggestions and criticisms should be carefully documented and summarized.

The principal concern at this stage is to make every effort to publicize the program to the public and to encourage feedback concerning possible revisions. Although considerable controversy could be generated, it is far better that these attitudes be expressed during the developmental stages than after the program has been adopted. After adoption, arguments are likely to center around individual cases rather than on the program itself.

Step 19: Changes Required Because of Public Response

If the criticisms or suggestions from Step 18 warrant changing the program goals, these adjustments should be made by the Advisory Committee (Step 15).

If significant changes are made within some of the program areas (Step 16), these changes should be made and sent to the affected Teacher Planning Committees for their approval (Step 14). Steps 14-19 would then be followed; however, it is hoped that this process could proceed much more rapidly the second or third time around than it did on the first cycle.

Steps 20-21: Formal Plan Submitted to Local School Board for Acceptance

At this stage, the formal plan is presented to the school board in its entirety for approval. Up to this point it is expected that the school board would have been receiving periodic progress reports from the Advisory Committee. Because of the care that has been taken to this point to involve many segments of the local and school communities in shaping the content of the program, it is hoped that the school board would be willing to accept this aspect of the report. The school board should be concerned principally with whether or not the program satisfies the state board's requirements and does not violate any local, state, or federal ordinances. If the report is not accepted, criticisms should be documented and returned along with the report to the Advisory Committee for revision. If necessary, Steps 15-21 would again be followed until the school board approves the program.

PHASE VI

Assessment of Present Seniors' Competencies and Publication of Results

Step 22: Assessment of Present Seniors' Competencies with Tests Developed in CBHSD Program

Although the performance indicators included in the CBHSD program would never be administered to seniors as a single battery of tests, multiple matrix sampling is employed at this time to assess the achievement of the present senior class with respect to the competencies identified in the program. Multiple matrix sampling is an evaluation procedure used to evaluate the achievement

for a group of pupils rather than for individual students. Students are randomly assigned to numerous groups. Similarly, the competencies to be measured are randomly assigned to an equal number of clusters. Each group of students then is administered a different cluster of competencies. Such an evaluation design allows the division's administrators to estimate the percentage of seniors who have mastered each of the competencies specified in the CBHSD program without requiring students to be tested for an inordinate length of time.

Two purposes are accomplished by administering these tests to seniors who will not be affected by the graduation requirements. The assessment provides the school system with data regarding the percentage of seniors who were mastering the competencies specified in the CBHSD program prior to the implementation of the program. This information will permit the school system to evaluate the effect that the new graduation requirements have on the mastery of the competencies by its high school students.

Step 23: Revision of Performance Indicators

The second purpose achieved by this assessment is that it serves as a pilot-test for the performance indicators. Confusion in directions or item content could emerge and should be documented so that the appropriate Teacher Planning Committees can rewrite or reconstruct some of the performance indicators. When a students' graduation is at stake, care should be taken to ensure that test items are fair to the student and can be objectively evaluated by the teachers.

Step 24: Publicize Plan and Status of Present Seniors

The final CBHSD program is printed and distributed in its entirety to all high school teachers, to every administrator in the school system, and to each member of the school board, Advisory Committee, and Teacher Planning Committees. Summaries of the program are given to all high school students and their parents once the program is put into effect. Copies of the summaries also are made available to members of the community upon request.

The findings of the initial trial testing program are made public in order to inform the community of how well present high school seniors are performing on the competencies to be required for graduation. It would be expected that for the first few years seniors will perform better each year until the competencies are fully integrated into the high school curriculum.

CONCLUSION

By 1981, every local school district in the State of Virginia will be required to have an operational Competency-Based High School Diploma program. Although localities may have favored the latitude which the State Board of Education gave to them to develop their own programs, a tremendous responsibility was placed on local school officials. At the same time, little direction or assistance has been offered by the State Department to the localities in developing plans. For this reason, a CBHSD Model was designed which, it was hoped, would provide guidelines to school districts to follow which will lead to well conceptualized and justified CBHSD programs. The Model was based on a commitment to include as many segments of the community and school system as possible in the decision-making process. The end product of the Model, if it is sincerely and effectively executed, will be the specification of valid high school minimum competencies and the construction of a series of tests which will accurately measure attainment of these competencies.

ADDENDUM

During the 1978 session, the Virginia General Assembly passed an amendment to the Standards of Quality which transferred the responsibility for the development of graduation tests from the localities to the State Department. Although localities may supplement the State Department's test, all seniors will be required to pass the latter before they are awarded a high school diploma. The State Department has already indicated that it is inclined to purchase a commercially prepared test.

Despite the legislative changes, no revisions have been made to this paper. The model is still considered worthwhile and should provide localities in Virginia, as well as those outside the state, with sound guidelines for developing CBHSD programs.

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